Journal of Biomedical Materials Research
Author Index—Volume 52

Adnet, J.-J. See Nkamgueu, E. M., 587
Ahariz, M.
—; Mouhyi, J.; Louette, P.; Van Reck, J.; Malevez, C.; Courtois, P.: Adsorption of peroxidase on titanium surfaces: A pilot study, 567
Aiba, Y. See Iwasaki, Y., 701
Ainola, M. See Takei, I., 613
Akiyama, H. See Ohsawa, K., 460
—; See Nishio, K., 652;
Altankov, G.
—; Thom, V.; Groth, T.; Jankova, K.; Jonsson, G.; Ulbricht, M.: Modulating the biocompatibility of polymer surfaces with poly(ethylene glycol): Effect of fibronectin, 219
Armes, S. P. See Lowe, A. B., 88
Asoo, B.
—; McNaney, J. M.; Mitamura, Y.; Ritchie, R. O.: Cyclic fatigue-crack propagation in sapphire in air and simulated physiological environments, 488
Aymes-Chodur, C. See Porté-Durrieu, M. C., 119
Ayyaswamy, P. S. See Qiu, Q.-Q., 66

Bachrach, N. See Gloeckner, D. C., 365
Baquey, Ch. See Porté-Durrieu, M. C., 119
Bär, F. W.
—; van der Veen, F. H.; Benzina, A.; Habets, J.; Koole, L. H.: New biocompatible polymer surface coating for stents results in a low neointimal response, 193
Barbari, T. A. See Clark, H., 183
Bareggi, R. See Grill, V., 479
Barry, F. P. See Ponticiello, M. S., 246
Beebe, D. J. See Folch, A., 346
Benhayoune, H. See Nkamgueu, E. M., 587
Benzina, A. See Bär, F. W., 193
Berger, G. See Knabe, C., 498
Bernard, J. See Nkamgueu, E. M., 587
Bertram, C. D. See Fujisawa, N., 517
Besong, A. A. See Matthews, J. B., 296
Betz, N. See Porté-Durrieu, M. C., 119
Bezemer, J. M.
—; Oude Weme, P.; Grijpma, D. W.; Dijkstra, P. J.; van Blitterswijk, C. A.; Feijen, J.: Amphiphilic poly(ether ester amide) multiblock copolymers as biodegradable matrices for the controlled release of proteins, 8
Billiar, K. L. See Gloeckner, D. C., 365
Billingham, N. C. See Lowe, A. B., 88
Blanchat, C. See Hamadouche, M., 422
Bloebaum, R. D. See Willie, B. M., 558
Bobyn, J. D. See Hacking, S. A., 631
Bonhomme, P. See Nkamgueu, E. M., 587
Bonnell, D. A. See Effah Kaufmann, E. A. B., 825
Bouchet, B. Y.
—; Colón, M.; Polotsky, A.; Shikani, A. H.; Hungerford, D. S.; Frondoza, C. G.: Beta-1 integrin expression by human nasal chondrocytes in microcarrier spinner culture, 716
Boynton, E. L.
—; Waddell, J.; Meek, E.; Labow, R. S.; Edwards, V.; Santerre, J. P.: The Effect of polyethylene particle chemistry on human monocyte-macrophage function *in vitro*, 239
Brailey, L. L. See Cowles, E. A., 725
Brescia, E. See Milella, E., 695
Brown, C. E., Jr. See Moretton, T. R., 528
Brown, P. W. See Greish, Y. E., 687
Bulmus, V. See Hoffman, A. S., 577
Byun, Y. See Kim, K., 836

Cadenaro, M. See Grill, V., 479
Caillon, J. See Gautier, H., 308
Calvert, J. W.
—; Marra, K. G.; Cook, L.; Kumta, P. N.; DiMilla, P. A.; Weiss, L. E.: Characterization of osteoblast-like behavior of cultured bone marrow stromal cells on various polymer surfaces, 279
Campbell, S. See Franco, M., 261
Cavedagna, D. See Ciapetti, G., 338
Cenni, E. See Ciapetti, G., 338
Chang, W.-H. See Sung, H.-W., 77
Chang, W. H.-S. See Sun, J.-S., 142
Chang, Y. See Sung, H.-W., 77
Chang, Y.-L.
—; Stanford, C. M.; Keller, J. C.: Calcium and phosphate supplementation promotes bone cell mineralization: Implications for hydroxyapatite (HA)-enhanced bone formation, 270
Chen, G. See Hoffman, A. S., 577
Chen, G. Q. See Feng, Q. L., 662
Chen, J. See Hoffman, A. S., 577
Chen, L.-T. See Sun, J.-S., 509
Chen, Y.-C. See Sung, H.-W., 77
Chen, Y.-L. See Shih, C.-C., 323, 395
Chen, Z. Q. See Yang, Y. Z., 333
Cheung, C. See Hoffman, A. S., 577
Cheung, K. M. C. See Li, Y. W., 164
Chilkoti, A. See Hoffman, A. S., 577
Chiu, K. Y. See Li, Y. W., 164
Cholewa-Kowalska, K. See Laczka, M., 601
Chow, S. P. See Li, Y. W., 164
Chuanxian, D. See Shunyan, T., 572
Chung, K.-H. See Shih, C.-C., 323, 395
Ciapetti, G.
—; Granchi, D.; Cenni, E.; Savarino, L.; Cavedagna, D.; Pizzoferrato, A.: Cytotoxic effect of bone cements in HL-60 cells: distinction between apoptosis and necrosis, 338
Clark, H.
—; Barbari, T. A.; Stump, K.; Rao, G.: Histologic evaluation of the inflammatory response around implanted hollow fiber membranes, 183
Cole, C. A. See Hoffman, A. S., 577
Colón, M. See Bouchet, B. Y., 716

Journal of Biomedical Materials Research
Author Index—Volume 52

Adnet, J.-J. See Nkamgueu, E. M., 587
Ahariz, M.
—; Mouhyi, J.; Louette, P.; Van Reck, J.; Malevez, C.; Courtois, P.: Adsorption of peroxidase on titanium surfaces: A pilot study, 567
Aiba, Y. See Iwasaki, Y., 701
Ainola, M. See Takei, I., 613
Akiyama, H. See Ohsawa, K., 460
—; See Nishio, K., 652;
Altankov, G.
—; Thom, V.; Groth, T.; Jankova, K.; Jonsson, G.; Ulbricht, M.: Modulating the biocompatibility of polymer surfaces with poly(ethylene glycol): Effect of fibronectin, 219
Armes, S. P. See Lowe, A. B., 88
Asoo, B.
—; McNaney, J. M.; Mitamura, Y.; Ritchie, R. O.: Cyclic fatigue-crack propagation in sapphire in air and simulated physiological environments, 488
Aymes-Chodur, C. See Porté-Durrieu, M. C., 119
Ayyaswamy, P. S. See Qiu, Q.-Q., 66

Bachrach, N. See Gloeckner, D. C., 365
Baquey, Ch. See Porté-Durrieu, M. C., 119
Bär, F. W.
—; van der Veen, F. H.; Benzina, A.; Habets, J.; Koole, L. H.: New biocompatible polymer surface coating for stents results in a low neointimal response, 193
Barbari, T. A. See Clark, H., 183
Bareggi, R. See Grill, V., 479
Barry, F. P. See Ponticiello, M. S., 246
Beebe, D. J. See Folch, A., 346
Benhayoune, H. See Nkamgueu, E. M., 587
Benzina, A. See Bär, F. W., 193
Berger, G. See Knabe, C., 498
Bernard, J. See Nkamgueu, E. M., 587
Bertram, C. D. See Fujisawa, N., 517
Besong, A. A. See Matthews, J. B., 296
Betz, N. See Porté-Durrieu, M. C., 119
Bezemer, J. M.
—; Oude Weme, P.; Grijpma, D. W.; Dijkstra, P. J.; van Blitterswijk, C. A.; Feijen, J.: Amphiphilic poly(ether ester amide) multiblock copolymers as biodegradable matrices for the controlled release of proteins, 8
Billiar, K. L. See Gloeckner, D. C., 365
Billingham, N. C. See Lowe, A. B., 88
Blanchat, C. See Hamadouche, M., 422
Bloebaum, R. D. See Willie, B. M., 558
Bobyn, J. D. See Hacking, S. A., 631
Bonhomme, P. See Nkamgueu, E. M., 587
Bonnell, D. A. See Effah Kaufmann, E. A. B., 825
Bouchet, B. Y.
—; Colón, M.; Polotsky, A.; Shikani, A. H.; Hungerford, D. S.; Frondoza, C. G.: Beta-1 integrin expression by human nasal chondrocytes in microcarrier spinner culture, 716
Boynton, E. L.
—; Waddell, J.; Meek, E.; Labow, R. S.; Edwards, V.; Santerre, J. P.: The Effect of polyethylene particle chemistry on human monocyte-macrophage function *in vitro*, 239
Brailey, L. L. See Cowles, E. A., 725
Brescia, E. See Milella, E., 695
Brown, C. E., Jr. See Moretton, T. R., 528
Brown, P. W. See Greish, Y. E., 687
Bulmus, V. See Hoffman, A. S., 577
Byun, Y. See Kim, K., 836

Cadenaro, M. See Grill, V., 479
Caillon, J. See Gautier, H., 308
Calvert, J. W.
—; Marra, K. G.; Cook, L.; Kumta, P. N.; DiMilla, P. A.; Weiss, L. E.: Characterization of osteoblast-like behavior of cultured bone marrow stromal cells on various polymer surfaces, 279
Campbell, S. See Franco, M., 261
Cavedagna, D. See Ciapetti, G., 338
Cenni, E. See Ciapetti, G., 338
Chang, W.-H. See Sung, H.-W., 77
Chang, W. H.-S. See Sun, J.-S., 142
Chang, Y. See Sung, H.-W., 77
Chang, Y.-L.
—; Stanford, C. M.; Keller, J. C.: Calcium and phosphate supplementation promotes bone cell mineralization: Implications for hydroxyapatite (HA)-enhanced bone formation, 270
Chen, G. See Hoffman, A. S., 577
Chen, G. Q. See Feng, Q. L., 662
Chen, J. See Hoffman, A. S., 577
Chen, L.-T. See Sun, J.-S., 509
Chen, Y.-C. See Sung, H.-W., 77
Chen, Y.-L. See Shih, C.-C., 323, 395
Chen, Z. Q. See Yang, Y. Z., 333
Cheung, C. See Hoffman, A. S., 577
Cheung, K. M. C. See Li, Y. W., 164
Chilkoti, A. See Hoffman, A. S., 577
Chiu, K. Y. See Li, Y. W., 164
Cholewa-Kowalska, K. See Laczka, M., 601
Chow, S. P. See Li, Y. W., 164
Chuanxian, D. See Shunyan, T., 572
Chung, K.-H. See Shih, C.-C., 323, 395
Ciapetti, G.
—; Granchi, D.; Cenni, E.; Savarino, L.; Cavedagna, D.; Pizzoferrato, A.: Cytotoxic effect of bone cements in HL-60 cells: distinction between apoptosis and necrosis, 338
Clark, H.
—; Barbari, T. A.; Stump, K.; Rao, G.: Histologic evaluation of the inflammatory response around implanted hollow fiber membranes, 183
Cole, C. A. See Hoffman, A. S., 577
Colón, M. See Bouchet, B. Y., 716

Composto, R. See Effah Kaufmann, E. A. B., 825
Cong, Z.
—; Jianxin, W.; Xingdong, Z.: Osteoinductivity and biomechanics of a porous ceramic with autogenic periosteum, 354
Cook, L. See Calvert, J. W., 279
Courtois, P. See Ahariz, M., 567
Cowles, E. A.
—; Brailey, L. L.; Gronowicz, G. A.: Integrin-mediated signaling regulates AP-1 transcription factors and proliferation in osteoblasts, 725
—; See Krause, A., 738
Cui, F. Z. See Liu, J. Q., 115
—; See Feng, Q. L., 662

Daculsi, G. See Gautier, H., 308
D'Antona, P.
—; Parker, W.O., Jr.; Zanirato, M.C.; Esposito, E.; Nastruzzi, C.: Rheologic and NMR characterization of monoglyceride-based formulations, 40
de Leij, L. F. M. H. See Khouw, I. M. S. L., 439
del Real, R. P.
—; Padilla, S.; Vallet-Regí, M.: Gentamicin release from hydroxyapatite/poly(ethyl methacrylate)/poly(methyl methacrylate)composites, 1
De Maeyer, E. A. P.
—; Verbeeck, R. M.; Vercruysse, C. W. J.: Conversion of octacalcium phosphate in calcium phosphate cements, 95
Deng, X. J. See Yang, Y. Z., 333
Derhami, K.
—; Wolfaardt, J. F.; Wennerberg, A.; Scott, P. G.: Quantifying the adherence of fibroblasts to titanium and its enhancement by substrate-attached material, 315
Desbiens, K. See Robitaille, R., 18
Dhert, W. J. A. See Nijhof, M. W., 709, 754
Dijkstra, P. J. See Bezemer, J. M., 8
Di Lenarda, R. See Grill, V., 479
DiMilla, P. A. See Calvert, J. W., 279
Ding, Z. See Hoffman, A. S., 577
Dohi, Y. See Noshi, T., 621
Dong, L. See Hoffman, A. S., 577
Dresbach, H. See Frank, R. D., 374
Driessens, F. C. M. See Knabe, C., 498
Duan, X. F. See Liu, J. Q., 115
Ducheyne, P. See Qiu, Q.-Q., 66
—; See Effah Kaufmann, E. A. B., 783, 825

Eberhardt, A. See Sierra, D. H., 534
Edidin, A. A. See Kurtz, S. M., 447
Edwards, V. See Boynton, E. L., 239
Effah Kaufmann, E. A. B.
—; Ducheyne, P.; Shapiro, I. M.: Effect of varying physical properties of porous, surface modified bioactive glass 45S5 on osteoblast proliferation and maturation, 783
—; Ducheyne, P.; Radin, S.; Bonnell, D. A.; Composto, R.: Initial events at the bioactive glass surface in contact with protein-containing solutions, 825
Eichmiller, F. C. See Xu, H. H. K., 107, 812
Esposito, E. See D'Antona, P., 40

Fan, Z. See Qi, G., 256
Feijen, J. See Bezemer, J. M., 8
Feldman, D. S. See Sierra, D. H., 534
Feng, Q. L.
—; Wu, J.; Chen, G. Q.; Cui, F. Z.; Kim, T. N.; Kim, J. O.: A mechanistic study of the antibacterial effect of silver ions on *Escherichia coli* and *Staphylococcus aureus*, 662
Ferrier, D. See Lerouge, S., 774
Fincham, A. G. See Wen, H. B., 762
Fini, M. See Torricelli, P., 177
Fischer, J.
—; Mechanical, thermal, and chemical analyses of the binary system Au-Ti in the development of a dental alloy, 678
Fisher, J. See Matthews, J. B., 296
Fitzner, R. See Knabe, C., 498
Fleer, A. See Nijhof, M. W., 709, 754
Folch, A.
—; Jo, B.-H.; Hurtado, O.; Beebe, D. J.; Toner, M.: Microfabricated elastomeric stencils for micropatterning cell cultures, 346
Fong, R. See Hoffman, A. S., 577
Foresman, P. A. See Sierra, D. H., 534
Franco, M.
—; Nealey, P. F.; Campbell, S.; Teixeira, A. I.; Murphy, C. J.: Adhesion and proliferation of corneal epithelial cells on self-assembled monolayers, 261
Frank, R. D.
—; Dresbach, H.; Thelen, H.; Sieberth, H.-G.: Glutardialdehyde induced fluorescence technique (GIFT): A new method for the imaging of platelet adhesion on biomaterials, 374
Franzen, R. See Maquet, V., 639
Frondoza, C. G. See Bouchet, B. Y., 716

Fujibayashi, S. See Kim, H.-M., 553
Fujimoto, K. See Osada, T., 53
Fujisawa, N.
—; Odell, R. A.; Poole–Warren, L. A.; Bertram, C. D.; Woodard, J. C.; Schindhelm, K.: Acute cellular interaction with textured surfaces in blood contact, 517

Gautier, H.
—; Caillon, J.; Le Ray, A. M.; Daculsi, G.; Merle, C.: Influence of isostatic compression on the stability of vancomycin loaded with a calcium phosphate–implantable drug delivery device, 308
Gerritsen, M.
—; Lutterman, J. A.; Jansen, J. A.: The influence of impaired wound healing on the tissue reaction to percutaneous devices using titanium fiber mesh anchorage, 135
Giardino, R. See Torricelli, P., 177
Giavaresi, G. See Torricelli, P., 177
Gilbert, J. L.
—; Hasenwinkel, J. M.; Wixson, R. L.; Lautenschlager, E. P.: A theoretical and experimental analysis of polymerization shrinkage of bone cement: A potential major source of porosity, 210
Gildenhaar, R. See Knabe, C., 498
Gingell, D. T. See Willie, B. M., 558
Giuseppetti, A. A. See Xu, H. H. K., 107
Gloeckner, D. C.
—; Sacks, M. S.; Billiar, K. L.; Bachrach, N.: Mechanical evaluation and design of a multilayered collagenous repair biomaterial, 365
Granchi, D. See Ciapetti, G., 338
Grant, D. M. See Jones, M. I., 413
Green, T. R. See Matthews, J. B., 296
Greenspan, D. C. See Hamadouche, M., 422
—; See Wen, H. B., 762
Greish, Y. E.
—; Brown, P. W.: Characterization of bioactive glass–reinforced HAP–polymer composites, 687
Grijpma, D. W. See Bezemer, J. M., 8
Grill, V.
—; Sandrucci, M. A.; Di Lenarda, R.; Cadenaro, M.; Narducci, P.; Bareggi, R.; Martelli, A. M.: Biocompatibility evaluation of dental metal alloys *in vitro*: Expression of extracellular matrix molecules and its relationship to cell proliferation rates, 479

Gronowicz, G. See Krause, A., 738
Gronowicz, G. A. See Cowles, E. A., 725
Gross, U. See Knabe, C., 498
Groth, T. See Altankov, G., 219
Guignot, C. See Lerouge, S., 774

Habets, J. See Bär, F. W., 193
Hacking, S. A.
—; Bobyn, J. D.; Toh, K.-K.; Tanzer, M.; Krygier, J. J.: Fibrous tissue ingrowth and attachment to porous tantalum, 631
Haipeng, G.
—; Yinghui, Z.; Jianchun, L.; Yandao, G.; Nanming, Z.; Xiufang, Z.: Studies on nerve cell affinity of chitosan-derived materials, 285
Hallé, J.-P. See Robitaille, R., 18
Hamadouche, M.
—; Meunier, A.; Greenspan, D. C.; Blanchat, C.; Zhong, J. P.; La Torre, G. P.; Sedel, L.: Bioactivity of sol-gel bioactive glass coated alumina implants, 422
Harris, J. M. See Hoffman, A. S., 577
Hasenwinkel, J. M. See Gilbert, J. L., 210
Hayakawa, S. See Wang, X.-X., 171
Hayashi, S. See Siriphannon, P., 30
Hayes, C. L. See Sanders, J. E., 231
Healy, K. E. See Rezania, A., 595
Heng, J. See Shunyan, T., 572
Henley, N. See Robitaille, R., 18
Hirayama, A. See Yoshinari, M., 388
Hoffman, A. S.
—; Stayton, P. S.; Bulmus, V.; Chen, G.; Chen, J.; Cheung, C.; Chilkoti, A.; Ding, Z.; Dong, L.; Fong, R.; Lackey, C. A.; Long, C. J.; Miura, M.; Morris, J. E.; Murthy, N.; Nabeshima, Y.; Park, T. G.; Press, O. W.; Shimoboji, T.; Shoemaker, S.; Yang, H. J.; Monji, N.; Nowinski, R. C.; Cole, C. A.; Priest, J. H.; Harris, J. M.; Nakamae, K.; Nishino, T.; Miyata, T.: Really smart bioconjugates of smart polymers and receptor proteins, 577
Hofmann, A. A. See Willie, B. M., 558
Hong, R.-C. See Sun, J.-S., 142, 509
Hong-Shong Chang, W. See Sun, J.-S., 509
Horiuchi, K. See Noshi, T., 621
Hsu, J.-P. See Young, T.-H., 748
Huang, J.-H. See Young, T.-H., 748
Huang, R.-N. See Tsai, C.-C., 58
Hung, S.-H. See Young, T.-H., 748
Hung, T.-Y. See Sun, J.-S., 142
Hungerford, D. S. See Bouchet, B. Y., 716
Hurtado, O. See Folch, A., 346
Hwang, Y.-S. See Park, J.-C., 669
Hyon, S.-H. See Park, J.-C., 669

Ichijima, K. See Noshi, T., 621
Ichinose, N. See Otsuka, M., 819
Ida, H. See Takei, I., 613
Ikeuchi, M. See Noshi, T., 621
Ingham, E. See Matthews, J. B., 296
Ishihara, K. See Sakai, T., 24, 128
—; See Iwasaki, Y., 701
Ishii, M. See Takei, I., 613
Ito, A. See Otsuka, M., 819
Ito, H. See Ohsawa, K., 460
Iwasaki, Y.
—; Aiba, Y.; Morimoto, N.; Nakabayashi, N.; Ishihara, K.: Semi-interpenetrating polymer networks composed of biocompatible phospholipid polymer and segmented polyurethane, 701

Jallot, E. See Nkamgueu, E. M., 587
Jankova, K. See Altankov, G., 219
Jansen, J. A. See Gerritsen, M., 135
Jérôme, R. See Maquet, V., 639
Jianchun, L. See Haipeng, G., 285
Jianxin, W. See Cong, Z., 354
Jo, B.-H. See Folch, A., 346
Jones, M. I.
—; McColl, I. R.; Grant, D. M.; Parker, K. G.; Parker, T. L.: Protein adsorption and platelet attachment and activation, on TiN, TiC, and DLC coatings on titanium for cardiovascular applications, 413
Jonsson, G. See Altankov, G., 219

Kadiyala, S. See Ponticiello, M. S., 246
Kafrawy, A. H. See Moretton, T. R., 528
Kamalesh, S.
—; Tan, P.; Wang, J.; Lee, T.; Kang, E.-T.; Wang, C.-H.: Biocompatibility of electroactive polymers in tissues, 467
Kameshima, Y. See Siriphannon, P., 30
Kang, E.-T. See Kamalesh, S., 467
Kato, T. See Yoshinari, M., 388
Keller, J. C. See Chang, Y.-L., 270
Khouw, I. M. S. L.
—; van Wachem, P. B.; Molema, G.; Plantinga, J. A.; de Leij, L. F. M. H.; van Luyn, M. J. A.: The foreign body reaction to a biodegradable biomaterial differs between rats and mice, 439
Kilian, L. See Nkamgueu, E. M., 587
Kim, C. See Kim, K., 836
Kim, H.-M.
—; Kokubo, T.; Fujibayashi, S.; Nishiguchi, S.; Nakamura, T.: Bioactive macroporous titanium surface layer on titanium substrate, 553
—; See Nishio, K., 652
Kim, J. O. See Feng, Q. L., 662
Kim, K.
—; Kim, C.; Byun, Y.: Preparation of a PEG-grafted phospholipid Langmuir-Blodgett monolayer for blood-compatible material, 836
Kim, T. N. See Feng, Q. L., 662
Kirkpatrick, C. J. See van Kooten, T. G., 199
Klein, C. L. See van Kooten, T. G., 199
Knabe, C.
—; Driessens, F. C. M.; Planell, J. A.; Gildenhaar, R.; Berger, G.; Reif, D.; Fitzner, R.; Radlanski, R. J.; Gross, U.: Evaluation of calcium phosphates and experimental calcium phosphate bone cements using osteogenic cultures, 498
Kohno, H. See Ohsawa, K., 460
Kokubo, T. See Kim, H.-M., 553
—; See Nishio, K., 652
Konttinen, Y. T. See Takei, I., 613
Koole, L. H. See Bär, F. W., 193
Krause, A.
—; Cowles, E. A.; Gronowicz, G.: Integrin-mediated signaling in osteoblasts on titanium implant materials, 738
Krygier, J. J. See Hacking, S. A., 631
Kumta, P. N. See Calvert, J. W., 279
Kurtz, S. M.
—; Muhlstein, C. L.; Edidin, A. A.: Surface morphology and wear mechanisms of four clinically relevant biomaterials after hip simulator testing, 447
Kusy, R. P.
—; Whitley, J. Q.: Resistance to sliding of orthodontic appliances in the dry and wet states: Influence of archwire alloy, interbracket distance, and bracket engagement, 797
Kwok, C.-F. See Shih, C.-C., 395
Kwon, G. S. See Lavasanifar, A., 831
Kwon, S. Y. See Takei, H., 382

Labow, R. S. See Boynton, E. L., 239
Lackey, C. A. See Hoffman, A. S., 577
Laczka, M.
—; Cholewa-Kowalska, K.; Laczka-Osyczka, A.; Tworzydlo, M.; Turyna, B.: Gel-derived

materials of a CaO-P_2O_5-SiO_2 system modified by boron, sodium, magnesium, aluminum, and fluorine compounds, 601
Laczka-Osyczka, A. See Laczka, M., 601
Lai, S.-T. See Shih, C.-C., 395
La Torre, G. P. See Hamadouche, M., 422
Lautenschlager, E. P. See Gilbert, J. L., 210
Lavasanifar, A.
—; Samuel, J.; Kwon, G. S.: Micelles of poly(ethylene oxide)-*block*-poly (*N*-alkyl stearate L-aspartamide): synthetic analogues of lipoproteins for drug delivery, 831
Layrolle, P. See Otsuka, M., 819
Lee, J.-E. See Park, J.-C., 669
Lee, T. See Kamalesh, S., 467
Legan, J. J. See Moretton, T. R., 528
Lemons, J. E. See Sierra, D. H., 534
Leong, J. C. Y. See Li, Y. W., 164
Le Ray, A. M. See Gautier, H., 308
Lerouge, S.
—; Guignot, C.; Tabrizian, M.; Ferrier, D.; Yagoubi, N.; Yahia, L'H.: Plasma-based sterilization: Effect on surface and bulk properties and hydrolytic stability of reprocessed polyurethane electrophysiology catheters, 774
Li, X. See Zhao, H., 157
Li, Y. W.
—; Leong, J. C. Y.; Lu, W. W.; Luk, K. D. K.; Cheung, K. M. C.; Chiu, K. Y.; Chow, S. P.: A novel injectable bioactive bone cement for spinal surgery: a developmental and preclinical study, 164
Liang, H. C. See Tsai, C.-C., 58
Liang, I-L. See Sung, H.-W., 77
Lin, F.-H. See Sun, J.-S., 142, 509
Lin, S.-J. See Shih, C.-C., 323, 395
Lindenhayn, K. See Perka, C., 543
Liu, H.-C. See Sun, J.-S., 142, 509
Liu, J. Q.
—; Luo, Z. S.; Cui, F. Z.; Duan, X. F.; Peng, L.-M.: High-resolution transmission electron microscopy investigations of a highly adhesive hydroxyapatite coating/titanium interface fabricated by ion-beam-assisted deposition, 115
Lloyd, A. W. See Lowe, A. B., 88
Lockwood, P. E. See Wataha, J. C., 360
Long, C. J. See Hoffman, A. S., 577
Louette, P. See Ahariz, M., 567
Lowe, A. B.
—; Vamvakaki, M.; Wassall, M. A.; Wong, L.; Billingham, N. C.; Armes, S. P.; Lloyd, A. W.: Well-defined sulfobetaine-based statistical copolymers as potential antibioadherent coatings, 88
Lu, W. W. See Li, Y. W., 164
Luk, K. D. K. See Li, Y. W., 164
Luo, Z. S. See Liu, J. Q., 115
Lutterman, J. A. See Gerritsen, M., 135

Ma, P. X. See Zhang, R., 430
Malevez, C. See Ahariz, M., 567
Malgrange, B. See Maquet, V., 639
Maquet, V.
—; Martin, D.; Malgrange, B.; Franzen, R.; Schoenen, J.; Moonen, G.; Jérôme, R.: Peripheral nerve regeneration using bioresorbable macroporous polylactide scaffolds, 639
Marra, K. G. See Calvert, J. W., 279
Martelli, A. M. See Grill, V., 479
Martin, D. See Maquet, V., 639
Marunaka, S. See Otsuka, M., 819
Massaro, C. See Milella, E., 695
Matsuda, Y. See Otsuka, M., 819
Matsumura, K. See Park, J.-C., 669
Matsuoka, H. See Ohsawa, K., 460
Matthews, J. B.
—; Besong, A. A.; Green, T. R.; Stone, M. H.; Wroblewski, B. M.; Fisher, J.; Ingham, E.: Evaluation of the Response of Primary Human Peripheral Blood Mononuclear Phagocytes to Challenge with *In Vitro* Generated Clinically Relevant UHMWPE Particles of Known Size and Dose, 296
McColl, I. R. See Jones, M. I., 413
McNaney, J. M. See Asoo, B., 488
Meek, E. See Boynton, E. L., 239
Merle, C. See Gautier, H., 308
Meunier, A. See Hamadouche, M., 422
Milella, E.
—; Brescia, E.; Massaro, C.; Ramires, P. A.: Chemico-physical properties of hyaluronan-based sponges, 695
Milošev, I.
—; Strehblow, H.-H.: The behavior of stainless steels in physiological solution containing complexing agent studied by X-ray photoelectron spectroscopy, 404
Mitamura, Y. See Asoo, B., 488
Miura, M. See Hoffman, A. S., 577
Miyata, T. See Hoffman, A. S., 577
Mizuno, K. See Osada, T., 53
Molema, G. See Khouw, I. M. S. L., 439
Monji, N. See Hoffman, A. S., 577
Moonen, G. See Maquet, V., 639
Moradian–Oldak, J. See Wen, H. B., 762
Moretton, T. R.
—; Brown, C. E., Jr.; Legan, J. J.; Kafrawy, A. H.: Tissue reactions after subcutaneous and intraosseous implantation of mineral trioxide aggregate and ethoxybenzoic acid cement, 528
Morimoto, N. See Iwasaki, Y., 701
Morita, S. See Sakai, T., 24, 128
Morris, J. E. See Hoffman, A. S., 577
Mouhyi, J. See Ahariz, M., 567
Muhlstein, C. L. See Kurtz, S. M., 447
Murphy, C. J. See Franco, M., 261
Murthy, N. See Hoffman, A. S., 577

Nabeshima, T. See Osada, T., 53
Nabeshima, Y. See Hoffman, A. S., 577
Naito, H. See Otsuka, M., 819
Nakabayashi, N. See Sakai, T., 24, 128
—; See Iwasaki, Y., 701
Nakamae, K. See Hoffman, A. S., 577
Nakamura, T. See Ohsawa, K., 460
—; See Kim, H.-M., 553
—; See Nishio, K., 652
Nanming, Z. See Haipeng, G., 285
Narducci, P. See Grill, V., 479
Nastruzzi, C. See D'Antona, P., 40
Nealey, P. F. See Franco, M., 261
Neo, M. See Ohsawa, K., 460
—; See Nishio, K., 652
Nijhof, M. W.
—; Stallmann, H. P.; Vogely, H. C.; Fleer, A.; Schouls, L. M.; Dhert, W. J. A.; Verbout, A. J.: Prevention of infection with tobramycin-containing bone cement or systemic cefazolin in an animal model, 709
—; Dhert, W. J. A.; Fleer, A.; Vogely, H. C.; Verbout, A. J.: Prophylaxis of implant-related staphylococcal infections using tobramycin-containing bone cement, 754
Nishiguchi, S. See Kim, H.-M., 553
—; See Nishio, K., 652
Nishino, T. See Hoffman, A. S., 577
Nishio, K.
—; Neo, M.; Akiyama, H.; Nishiguchi, S.; Kim, H.-M.; Kokubo, T.; Nakamura, T.: The effect of alkali- and heat-treated titanium and apatite-formed titanium on osteoblastic differentiation of bone marrow cells, 652
Nkamgueu, E. M.
—; Adnet, J.-J.; Bernard, J.; Zierold, K.; Kilian, L.; Jallot, E.; Benhayoune, H.; Bonhomme, P.: *In*

vitro effects of zirconia and alumina particles on human blood monocyte–derived macrophages: X-ray microanalysis and flow cytometric studies, 587
Noshi, T.
—; Yoshikawa, T.; Ikeuchi, M.; Dohi, Y.; Ohgushi, H.; Horiuchi, K.; Sugimura, M.; Ichijima, K.; Yonemasu, K.: Enhancement of the *in vivo* osteogenic potential of marrow/hydroxyapatite composites by bovine bone morphogenetic protein, 621
Nowinski, R. C. See Hoffman, A. S., 577

Oda, Y. See Yoshinari, M., 388
Odell, R. A. See Fujisawa, N., 517
Ogino, T. See Takei, I., 613
O'Grady, K. See Sierra, D. H., 534
Ohgushi, H. See Noshi, T., 621
Ohsawa, K.
—; Neo, M.; Matsuoka, H.; Akiyama, H.; Ito, H.; Kohno, H.; Nakamura, T.: The expression of bone matrix protein mRNAs around β-TCP particles implanted into bone, 460
Okada, K. See Siriphannon, P., 30
Okuda, K. See Yoshinari, M., 388
Osada, T.
—; Yamamura, K.; Yano, K.; Fujimoto, K.; Mizuno, K.; Sakurai, T.; Nabeshima, T.: Distribution and serum concentration of sisomicin released from fibrin glue-sealed Dacron graft in the rat and human, 53
Osaka, A. See Wang, X.-X., 171
Otsuka, M.
—; Marunaka, S.; Matsuda, Y.; Ito, A.; Layrolle, P.; Naito, H.; Ichinose, N.: Calcium level-responsive *in-vitro* zinc release from zinc containing tricalcium phosphate (ZnTCP), 819
Oude Weme, P. See Bezemer, J. M., 8

Padilla, S. See del Real, R. P., 1
Park, J.-C.
—; Hwang, Y.-S.; Lee, J.-E.; Park, K. D.; Matsumura, K.; Hyon, S.-H.; Suh, H.: Type I atelocollagen grafting onto ozone-treated polyurethane films: Cell attachment, proliferation, and collagen synthesis, 669
Park, K. D. See Park, J.-C., 669
Park, T. G. See Hoffman, A. S., 577
Parker, K. G. See Jones, M. I., 413
Parker, T. L. See Jones, M. I., 413
Parker, W.O., Jr., See D'Antona, P., 40
Peng, L.-M. See Liu, J. Q., 115
Perka, C.
—; Schultz, O.; Spitzer, R.-S.; Lindenhayn, K.: The influence of transforming growth factor β1 on mesenchymal cell repair of full-thickness cartilage defects, 543
Pierini, G. See Torricelli, P., 177
Pioletti, D. P. See Takei, H., 382
Pizzoferrato, A. See Ciapetti, G., 338
Planell, J. A. See Knabe, C., 498
Plantinga, J. A. See Khouw, I. M. S. L., 439
Polotsky, A. See Bouchet, B. Y., 716
Ponticiello, M. S.
—; Schinagl, R. M.; Kadiyala, S.; Barry, F. P.: Gelatin-based resorbable sponge as a carrier matrix for human mesenchymal stem cells in cartilage regeneration therapy, 246
Poole–Warren, L. A. See Fujisawa, N., 517
Porté-Durrieu, M. C.
—; Aymes-Chodur, C.; Betz, N.; Baquey, Ch.: Development of "heparin-like" polymers using swift heavy ion and gamma radiation. I. Preparation and characterization of the materials, 119
Press, O. W. See Hoffman, A. S., 577
Priest, J. H. See Hoffman, A. S., 577
Pujol, J. See Qi, G., 256

Qi, G.
—; Attenuation of acoustic emission body waves in acrylic bone cement and synthetic bone using wavelet time-scale analysis, 148
—; Pujol, J.; Fan, Z.: 3-D AE visualization of bone-cement fatigue locations, 256
Qiu, Q.-Q.
—; Ducheyne, P.; Ayyaswamy, P. S.: New bioactive, degradable composite microspheres as tissue engineering substrates, 66
Qu, S. See Zhao, H., 157
Qu, X.
—; Weinberger, J.: Novel β-emitting poly(ethylene terephthalate) surface modification, 492

Radin, S. See Effah Kaufmann, E. A. B., 825
Radlanski, R. J. See Knabe, C., 498
Ramires, P. A. See Milella, E., 695
Rao, G. See Clark, H., 183
Reif, D. See Knabe, C., 498
Rezania, A.
—; Healy, K. E.: The effect of peptide surface density on mineralization of a matrix deposited by osteogenic cells, 595
Ritchie, R. O. See Asoo, B., 488
Robitaille, R.
—; Desbiens, K.; Henley, N.; Hallé, J.-P.: Time course of transforming growth factor-β_1 (TGF-β_1) mRNA expression in the host reaction to alginate-poly-L-lysine microcapsules following implantations into rat epididymal fat pads, 18
Rocca, M. See Torricelli, P., 177
Rodeheaver, G. T. See Sierra, D. H., 534

Sacks, M. S. See Gloeckner, D. C., 365
Sakai, T.
—; Morita, S.; Shinomiya, K.; Watanabe, A.; Nakabayashi, N.; Ishihara, K.: Prevention of fibrous layer formation between bone and adhesive bone cement: *In vivo* evaluation of bone impregnation with 4-META/MMA-TBB cement, 24
—; Morita, S.; Shinomiya, K.-i.; Watanabe, A.; Nakabayashi, N.; Ishihara, K.: *In vivo* evaluation of the bond strength of adhesive 4-META/MMA-TBB bone cement under weight-bearing conditions, 128
Sakurai, T. See Osada, T., 53
Samuel, J. See Lavasanifar, A., 831
Sanders, J. E.
—; Stiles, C. E.; Hayes, C. L.: Tissue response to single-polymer fibers of varying diameters: Evaluation of fibrous encapsulation and macrophage density, 231
Sandrucci, M. A. See Grill, V., 479
Santavirta, S. See Takei, I., 613
Santerre, J. P. See Boynton, E. L., 239
Savarino, L. See Ciapetti, G., 338
Schedle, A. See Wataha, J. C., 360
Schinagl, R. M. See Ponticiello, M. S., 246
Schindhelm, K. See Fujisawa, N., 517
Schoenen, J. See Maquet, V., 639
Schouls, L. M. See Nijhof, M. W., 709
Schultz, O. See Perka, C., 543
Schumacher, G. E. See Xu, H. H. K., 812
Scott, P. G. See Derhami, K., 315
Sedel, L. See Hamadouche, M., 422
Shapiro, I. M. See Effah Kaufmann, E. A. B., 783

Shih, C.-C.
—; Lin, S.-J.; Chung, K.-H.; Chen, Y.-L.; Su, Y.-Y.: Increased corrosion resistance of stent materials by converting current surface film of polycrystalline oxide into amorphous oxide, 323
—; Lin, S.-J.; Chen, Y.-L.; Su, Y.-Y.; Lai, S.-T.; Wu, G. J.; Kwok, C.-F.; Chung, K.-H.: The cytotoxicity of corrosion products of nitinol stent wire on cultured smooth muscle cells, 395
Shikani, A. H. See Bouchet, B. Y., 716
Shimoboji, T. See Hoffman, A. S., 577
Shinomiya, K. See Sakai, T., 24
Shinomiya, K.-i., See Sakai, T., 128
Shoemaker, S. See Hoffman, A. S., 577
Shunyan, T.
—; Heng, J.; Chuanxian, D.: Effect of vapor-flame treatment on plasma sprayed hydroxyapatite coatings, 572
Sieberth, H.-G. See Frank, R. D., 374
Sierra, D. H.
—; O'Grady, K.; Toriumi, D. M.; Foresman, P. A.; Rodeheaver, G. T.; Eberhardt, A.; Feldman, D. S.; Lemons, J. E.: Modulation of mechanical properties in multiple-component tissue adhesives, 534
Siriphannon, P.
—; Kameshima, Y.; Yasumori, A.; Okada, K.; Hayashi, S.: Influence of preparation conditions on the microstructure and bioactivity of α-$CaSiO_3$ ceramics: Formation of hydroxyapatite in simulated body fluid, 30
Smith, D. T. See Xu, H. H. K., 812
Spitzer, R.-S. See Perka, C., 543
Stallmann, H. P. See Nijhof, M. W., 709
Stanford, C. M. See Chang, Y.-L., 270
Stayton, P. S. See Hoffman, A. S., 577
Stiles, C. E. See Sanders, J. E., 231
Stone, M. H. See Matthews, J. B., 296
Strehblow, H.-H. See Milošev, I., 404
Stump, K. See Clark, H., 183
Su, Y.-Y. See Shih, C.-C., 323, 395
Sugimura, M. See Noshi, T., 621
Suh, H. See Park, J.-C., 669
Sun, J.-S.
—; Chang, W. H.-S.; Hong, R.-C.; Hung, T.-Y.; Lin, F.-H.; Liu, H.-C.: Alveolar mononuclear cells can develop into multinucleated osteoclasts: An *in vitro* cell culture model, 142
—; Lin, F.-H.; Tsuang, Y.-H.; Chen, L.-T.; Hong, R.-C.; Hong-Shong Chang, W.; Liu, H.-C.: Effect of anti-inflammatory medication on monocyte response to titanium particles, 509
Sung, H.-W.
—; Chang, Y.; Liang, I-L.; Chang, W.-H.; Chen, Y.-C.: Fixation of biological tissues with a naturally occurring crosslinking agent: Fixation rate and effects of pH, temperature, and initial fixative concentration, 77
—; See Tsai, C.-C., 58
Sung, K.-L. P. See Takei, H., 382

Tabrizian, M. See Lerouge, S., 774
Takagi, M. See Takei, I., 613
Takei, H.
—; Pioletti, D. P.; Kwon, S. Y.; Sung, K.-L. P.: Combined effect of titanium particles and TNF-α on the production of IL-6 by osteoblast-like cells, 382
Takei, I.
—; Takagi, M.; Santavirta, S.; Ida, H.; Ishii, M.; Ogino, T.; Ainola, M.; Konttinen, Y. T.: Messenger ribonucleic acid expression of 16 matrix metalloproteinases in bone–implant interface tissues of loose artificial hip joints, 613
Tan, P. See Kamalesh, S., 467
Tanzer, M. See Hacking, S. A., 631
Teixeira, A. I. See Franco, M., 261
Thelen, H. See Frank, R. D., 374
Thom, V. See Altankov, G., 219
Tian, J. M. See Yang, Y. Z., 333
Tian, J. T. See Yang, Y. Z., 333
Toh, K.-K. See Hacking, S. A., 631
Toner, M. See Folch, A., 346
Toriumi, D. M. See Sierra, D. H., 534
Torricelli, P.
—; Fini, M.; Giavaresi, G.; Rocca, M.; Pierini, G.; Giardino, R.: Isolation and characterization of osteoblast cultures from normal and osteopenic sheep for biomaterials evaluation, 177
Tsai, C.-C.
—; Huang, R.-N.; Sung, H.-W.; Liang, H. C.: *In vitro* evaluation of the genotoxicity of a naturally occurring crosslinking agent (genipin) for biologic tissue fixation, 58
Tsuang, Y.-H. See Sun, J.-S., 509
Tsuru, K. See Wang, X.-X., 171
Turyna, B. See Laczka, M., 601
Tworzydlo, M. See Laczka, M., 601

Ulbricht, M. See Altankov, G., 219

Vallet-Regí, M. See del Real, R. P., 1
Vamvakaki, M. See Lowe, A. B., 88
van Blitterswijk, C. A. See Bezemer, J. M., 8
van der Veen, F. H. See Bär, F. W., 193
van Kooten, T. G.
—; Klein, C. L.; Kirkpatrick, C. J.: Cell-cycle control in cell–biomaterial interactions: Expression of p53 and Ki67 in human umbilical vein endothelial cells in direct contact and extract testing of biomaterials, 199
van Luyn, M. J. A. See Khouw, I. M. S. L., 439
Van Reck, J. See Ahariz, M., 567
van Wachem, P. B. See Khouw, I. M. S.L., 439
Verbeeck, R. M. H. See De Maeyer, E. A. P., 95
Verbout, A. J. See Nijhof, M. W., 709, 754
Vercruysse, C. W. J. See De Maeyer, E. A. P., 95
Vogely, H. C. See Nijhof, M. W., 709, 754

Waddell, J. See Boynton, E. L., 239
Wang, C.-H. See Kamalesh, S., 467
Wang, J. See Zhao, H., 157
—; See Kamalesh, S., 467
Wang, X.-X.
—; Hayakawa, S.; Tsuru, K.; Osaka, A.: Improvement of bioactivity of H_2O_2/$TaCl_5$-treated titanium after subsequent heat treatments, 171
Wassall, M. A. See Lowe, A. B., 88
Wataha, J. C.
—; Lockwood, P. E.; Schedle, A.: Effect of silver, copper, mercury, and nickel ions on cellular proliferation during extended, low-dose exposures, 360
Watanabe, A. See Sakai, T., 24, 128
Weinberger, J. See Qu, X., 492
Weiss, L. E. See Calvert, J. W., 279
Wen, H. B.
—; Moradian–Oldak, J.; Zhong, J. P.; Greenspan, D. C.; Fincham, A. G.: Effects of amelogenin on the transforming surface microstructures of Bioglass® in a calcifying solution, 762
Weng, J. See Zhao, H., 157
Wennerberg, A. See Derhami, K., 315
Whitley, J. Q. See Kusy, R. P., 797

Willie, B. M.
—; Gingell, D. T.; Bloebaum, R. D.; Hofmann, A. A.: Possible explanation for the white band artifact seen in clinically retrieved polyethylene tibial components, 558
Wixson, R. L. See Gilbert, J. L., 210
Wolfaardt, J. F. See Derhami, K., 315
Wong, L. See Lowe, A. B., 88
Woodard, J. C. See Fujisawa, N., 517
Wroblewski, B. M. See Matthews, J. B., 296
Wu, G. J. See Shih, C.-C., 395
Wu, J. See Feng, Q. L., 662

Xingdong, Z. See Cong, Z., 354
Xiufang, Z. See Haipeng, G., 285
Xu, H. H. K.
—; Eichmiller, F. C.; Giuseppetti, A. A.: Reinforcement of a self-setting calcium phosphate cement with different fibers, 107
—; Smith, D. T.; Schumacher, G. E.; Eichmiller, F. C.: Whisker-reinforced dental core buildup composites: Effect of filler level on mechanical properties, 812

Yagoubi, N. See Lerouge, S., 774
Yahia, L'H. See Lerouge, S., 774
Yamamura, K. See Osada, T., 53
Yandao, G. See Haipeng, G., 285
Yang, H. J. See Hoffman, A. S., 577
Yang, Y. Z.
—; Tian, J. M.; Tian, J. T.; Chen, Z. Q.; Deng, X. J.; Zhang, D. H.: Preparation of graded porous titanium coatings on titanium implant materials by plasma spraying, 333
Yano, K. See Osada, T., 53
Yasumori, A. See Siriphannon, P., 30
Yinghui, Z. See Haipeng, G., 285
Yonemasu, K. See Noshi, T., 621
Yoshikawa, T. See Noshi, T., 621
Yoshinari, M.
—; Oda, Y.; Kato, T.; Okuda, K.; Hirayama, A.: Influence of surface modifications to titanium on oral bacterial adhesion *in vitro*, 388
Young, T.-H.
—; Huang, J.-H.; Hung, S.-H.; Hsu, J.-P.: The role of cell density in the survival of cultured cerebellar granule neurons, 748

Zanirato, M.C. See D'Antona, P., 40
Zhang, D. H. See Yang, Y. Z., 333
Zhang, R.
—; Ma, P. X.: Synthetic nano-fibrillar extracellular matrices with predesigned macroporous architectures, 430
Zhang, X. See Zhao, H., 157
Zhao, H.
—; Li, X.; Wang, J.; Qu, S.; Weng, J.; Zhang, X.: Characterization of peroxide ions in hydroxyapatite lattice, 157
Zhong, J. P. See Hamadouche, M., 422
—; See Wen, H. B., 762
Zierold, K. See Nkamgueu, E. M., 587

Journal of Biomedical Materials Research
Subject Index—Volume 52

AP-1 transcription factors, 738
Acoustic emission, 148, 256
Adhesion, 261, 388
Adhesive bone cement, 24
Adhesive strength, 534
Affinity separation, 577
Alkali and heat treatment, 652
Alkaline phosphatase, 270
Alumina ceramic, 422
Alveolar mononuclear cells, 142
Amelogenin, 762
Amorphous oxide, 323
Amphotericin B, 831
Animal model, 709, 754
Antibacterial mechanism, 662
Antibioadherent, 88
Anti-inflammatory medication, 509
Apatite, 171, 553, 762
Apatite-formed titanium, 652
Apatite-like layer, 1
Apoptosis, 338
Atomic force microscopy, 762, 825
Attachment, 631
Attenuation, 148
Autoperiosteum, 354

β1, 543
β-1 integrin, 716
β-tricalcium phosphate, 460
Backscattered electron (BSE) imaging, 558
Balloon, 492
Beta-glycerophosphate, 270
Biaxial mechanical testing, 365
Binding, 797
Bioactive bone cement, 164
Bioactive glass, 66, 687, 762, 825
Bioactive glasses, 422
Bioactive materials, 30, 601
Bioactivity, 171, 354, 553
Bioceramics, 587
Biocompatibility, 18, 164 , 285, 360, 374, 413, 460, 467, 479, 528, 639, 701
Biocompatible materials, 346, 567
Biocomposite, 365
Bioconjugates, 577
Biodegradable polymer, 66
Biologic response, 296
Biological tissue, 77
Biomaterial, 88, 439, 819
Biomaterials, 171, 177, 199, 279
Biomatrix, 246
Biomechanics, 164
Bioreactor, 716
Biphasic calcium phosphate, 308
Block-copolymer, 8
Block copolymers, 831
Blood, 517
Bonding, 128
Bone cement, 128, 148, 210, 256, 338, 709, 754
Bone formation, 460
Bone marrow, 279
Bone marrow cell, 652
Bone morphogenetic protein, 621
Bone substitute, 354
Bone substitutes, 279
Bone tissue engineering, 783
Bony ingrowth, 553
Brachytherapy, 492

$CaSiO_3$ ceramics, 30
Calcium level-responsive drug release, 819
Calcium phosphate cement, 107
Calcium phosphate cements, 95, 498
Calcium phosphate ceramics, 354, 498
Calcium phosphate, 66
Calcium stearate, 558
Cartilage regeneration, 246
Cefazolin, 709
Cell adhesion, 88, 219, 315, 738
Cell-biomaterial interactions, 498
Cell cultures, 177
Cell cycle, 199
Cell density, 748
Cell proliferation, 479
Cell repair, 543
Cell signaling, 725, 738
Cell–surface interactions, 261.
Cell survival, 748
Cellular micropatterns, 346
Ceramic-fused-to-metal technique, 678
Ceramic whisker reinforcement, 812
Chitosan, 285, 492
Chondrogenesis, 246
Chromatography, 774
Citrate, 404
Clinical study, 53
Co-precipitation method, 30
Coating, 193, 422, 572
Collagen synthesis, 669
Commercially pure titanium, 333
Composite, 1, 66
Composites, 687
Conductive polymer, 467
Core buildup, 812
Corneal epithelial cells, 261
Corrosion, 323, 395, 678
Crack growth, 488
Crosslinked dermal sheep collagen, 439
Crosslinking agent, 58
Crystallinity, 572
Cyclic fatigue, 488
Cytokines, 239, 296, 509
Cytomimetic monolayer, 836
Cytotoxicity, 58, 360, 395

D,L-lactic acid, 492
DNA molecule, 662
DRG-derived neurons, 639
Degradation, 8, 695
Dental alloys, 479, 678
Dental composites, 812
Dental implants, 567
Diabetes mellitus, 135
Diamond-like carbon, 413
Drug delivery, 40, 66, 831
Drug delivery device, 308
Drug delivery system, 1, 819
Drug solubilization, 831

Elastic modulus, 447
Electrochemical oxidation, 404
Endothelial cell, 199
Extracellular matrix, 479

Fatigue, 256
Fiber, 430
Fiber kinematics, 365
Fiber length, 107, 517
Fiber reinforcement mechanisms, 107
Fiber strength, 107
Fibrin glue, 53

Fibroblasts, 479
Fibronectin, 219, 315, 725
Fibronectin receptor, 315
Fibro-porous biomaterials, 231
Fibrotic capsule, 183
Fibrous encapsulation, 231
Filler level, 812
Fixation condition, 77
Fixation rate, 77
Fluorescence microscopy, 374
Fluoropolymers, 119
Foreign body reaction, 183, 439
Friction, 797

Gamma radiation, 119
Genipin, 58, 77
Genotoxicity, 58
Gentamicin, 1
Glass-ceramics, 601
Glutaraldehyde, 58
Glutardialdehyde, 374
Gold–titanium alloy, 678
Graded porous coatings, 333
Graft copolymerization, 669
Graft infection, 53
Growth factor, 543, 748

HDPE, 447
HL 60 cells, 338
Heart valve prostheses, 488
Heat and annealing treatment, 157
Hemocompatibility, 119
High density polyethylene, 447
Hip simulator, 447
Histomorphometry, 422
Hollow fiber membrane, 183
Host reaction, 18
Human macrophages, 587
Hyaluronic acid derivatives, 695
Hybrid layer, 24
Hydrogel, 701
Hydrolytic stability, 774
Hydroxyapatite, 1, 30, 107, 115, 157, 270, 572, 621, 687
Hyperplasia, 193

IL-6, 382
Image analysis, 534
Immunoassay, 577
Impaired wound healing, 135
Implant, 388, 631
Implantation, 467, 528
Implants, 333
Impregnation, 24
Indentation, 812
Inflammation, 528
in situ hybridization, 460
Integrin, 725
Intelligent polymers, 577
Interface, 115
Interpenetrating polymer networks, 701
Interstitial pressure, 467
Intracellular potassium/sodium ratio, 587
Intracoronary radiation, 492
in vitro, 142
in vitro release, 819
in vivo models, 534
Ion-beam-assisted deposition, 115
Ion release, 498
Isosatic compression, 308

Joint replacement, 558

316 L stainless steel, 323
Langmuir-Blodgett, 836
Ligand density, 595

4-META, 24, 128
MMA/HEMA, 193
Macrophage, 231
Macrophages, 239, 296
Macroporous foams, 639
Macroporous layer, 553
Marrow mesenchymal stem cells, 621
Matrix, 430
Matrix metalloproteinase (MMP), 613
Matrix mineralization, 595
Mechanical behavior, 365, 447
Mechanical properties, 687
Mechanical stress, 716
Mechanical test, 128
Mesenchymal cell repair, 543
Mesenchymal stem cell, 246
Messenger ribonucleic acid (mRNA), 613
Metallic ions, 239
Metals, 360
Micelles, 831
Microcapsules, 18
Microcarrier, 716
Microfabricated stencil, 346
Microfibers, 231
Microfluidic, 346
Microstructure, 115
Mineralization, 270, 279
Modulus, 812
Monocyte, 360
Monoglycerides, 40
Morphological changes, 662
Mouse, 439

NMR spectroscopy, 40
NaOH and heat treatments, 553
Nano, 430
Nasal cartilage, 716
Necrosis, 338
Nerve cell affinity, 285
Nerve regeneration, 639
Neuron, 285
Neurons, 748
Nickel, 395
Nitinol, 323, 395
Northern blot, 652

O-phosphoric acid, 492
Octacalcium phosphate, 95
Oral bacteria, 388
Orthodontics, 797
Orthopedic stainless steel, 404
Osteoblast, 177, 270, 279, 382, 725
Osteoblastic differentiation, 652
Osteoblasts, 142, 498, 738
Osteoclasts, 142
Osteogenesis, 528, 621
Osteogenic cells, 595
Osteoinductivity, 354
Osteolysis, 613
Osteopenia, 177
Osteopontin, 460
Oxidation, 239
Oxidative metabolism, 587
Oxide film, 404
Ozone oxidation, 669

P53, 199
PA, 447
PDMS, 346
PEG lipid, 836
PET, 492
PTFE, 447
Particle size, 509
Particles, 239
Percutaneous device, 135
Peroxidase, 567
Peroxide ions, 157
Phagocytosis, 587
Phase diagram, 40
Phospholipid, 836
Phospholipid polymer, 701
Plasma-based sterilization, 774
Plasma spraying, 333, 572
Platelet activation, 413
Platelet adhesion, 413, 836
Platelets, 374
Poly(ether ester amide), 8
Poly(ethylene glycol), 219
Poly(sulfobetaine), 88
Polyacetal, 447
Polycrystalline oxide, 323
Polyethylene, 239
Polylactide, 639
Polymer, 193, 430
Polymer biocompatibility, 219
Polymer conjugation, 577
Polymeric biomaterials, 279
Polymeric peroxide, 669
Polymerization, 210
Polymers, 447
Polypropylene, 231
Polytetrafluoroethylene, 447
Polyurethane catheters, 774
Pore size, 783
Porosity, 210, 783

Porous, 631
Precursor, 95
Proliferation, 261, 382, 725
Prophylaxis of infection, 709, 754
Prosthetic loosening, 613
Protein adsorption, 285, 413, 701
Protein release, 8

ROS 17/2.8, 783
Radiation grafting, 119
Rat, 439, 467
Rat sciatic nerve, 639
Reaction path, 95
Recognition proteins, 577
Resorbable gelatin sponge, 246
Rheologic characterization, 40
Root end filling materials, 528
Rutherford backscattering spectrometry, 825

45S5 bioactive glass, 783
SEM, 374
Safety, 774
Sapphire, 488
Scaffold, 430
Segmented polyurethane, 701
Self-assembled monolayers, 261
Sensor, 183
Serum proteins, 825
Setting reaction, 95
Sheep, 177
Shrinkage, 210
Signal processing, 148
Silver ions, 662
Simulated body fluid (SBF), 30, 553
Sisomicin, 53
Site-specific conjugation, 577
Sliding mechanics, 797
Small punch test, 447
Smart polymers, 577
Smooth muscle cell, 395
Soft tissue, 631
Soft-tissue response, 135
Sol-gel, 422
Sol-gel method, 601
Source location, 256
Spinal surgery, 164
Sponges, 695
Staphylococci, 754
Static fatigue, 488
Statistical copolymers, 88
Stent, 193
Stimuli-responsive polymers, 577
Strength, 812
Strontium-containing hydroxyapatite, 164
Structural analysis, 157
Subcutaneous implants, 183
Submucosa, 365
Surface modification, 219, 333, 388, 492, 595
Surface modifications, 774
Surface, 695
Swelling, 8, 695
Swift heavy ion, 119

TEM, 24
TGF-β_1, time-course, 18
TNF-α, 382
Tantalum, 631
Testing methods, 199
Textured surface, 517
Thermal analysis, 678
Ti particles, 382
Tissue adhesive, 534
Tissue engineering, 430
Titania gel, 171
Titanium, 115, 171, 315, 388, 509, 567, 738
Titanium fiber mesh anchorage, 135
Titanium metal, 553
Tobramycin, 709, 754
Tooth enamel, 762
Total hip arthroplasty, 613
Total hip replacement, 447
Toughness, 812
Transmission electron microscopy, 662
Tribology, 797
Tricalcium phosphate, 819
Type I atelocollagen grafting, 669
Type I collagen, 725

UHMWPE, 296, 447
Ultra-high molecular weight polyethylene (UHMWPE), 447, 558
Ultraviolet and microbiologic assays, 308

Vancomycin, 308
Vapor-flame treatment, 572
Vascular prostheses, 53
Volume fraction, 107

Wall shear stress, 517
Wavelet, 148
Wear, 447
Wear debris, 296
White band, 558
White cells, 517

XPS, 404, 467

Zinc, 819